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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,744	08/20/2003	Steve T. Lin	19870.052201	9151

32361 7590 08/08/2007  
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EXAMINER

FUBARA, BLESSING M

ART UNIT	PAPER NUMBER
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1618

MAIL DATE	DELIVERY MODE
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08/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/645,744	Applicant(s) LIN ET AL.	
	Examiner Blessing M. Fubara	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-111 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,13,16,18,19,24,27,28,30-37,39,43,45,46,51 and 104-107 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/26/07</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 3,12,14,15,17,20-23,25,26,29,38,40-42,44,47-50,52-103 and 108-111.

### **DETAILED ACTION**

Examiner acknowledges receipt of request for extension of time, response to restriction requirement and IDS, all filed 3/26/07. Claims 1-111 are pending.

#### ***Election/Restrictions***

1. Applicant's election of Group I, claims 1, 2, 4-11, 13, 16, 18, 19, 24, 27, 28, 30-37, 39, 43, 45, 46, 51 and 104-107 in the reply filed on 3/26/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Examiner further acknowledges applicant's withdrawal of claims 3, 12, 14, 15, 17, 20-23, 25, 26, 29, 38, 40-42, 44, 47-50, 52-103 and 108-111 without prejudice.

#### ***Information Disclosure Statement***

Applicant states that the information disclosure statement lists "a number of patents/applications including subject matter directed to carrier of the type currently claimed." However, applicant did not point to specific references that include the subject matter directed to the carrier currently claimed.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 4-11, 13, 16, 18, 19, 24, 27, 28, 30-37, 39, 43, 45, 46, 51 and 104-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarrett et al. (WO 98/12243) in view of Rodgers et al. (US 6,258,778).

Jarret teaches macromer carrier composition (abstract), the macromers are block copolymers including water soluble block, at least one biodegradable block and at least one polymerizable group (page 2, line 28 to page 3 line 1); at least one of the biodegradable block comprises carbonate or dioxanone and the macromer can also contain other degradable linkages or groups in addition to the carbonate or dioxanone (page 3, lines 1-4) with poly(hydroxyl acid) such as lactic acid and glycolic acid, polycaprolactones, polyorthoesters, polyanhydrides (page 3, lines 9-13; page 15, lines 4-23) as the other degradable linkages; such other linkage; the carbonate may come from trimethylene carbonate (Figures 1 and 3; page 15, lines 25-28); the structure of the macromer meets the structure of the claimed macromer in claims 1, 24, 27, 51, 104 and 106. The carrier composition is used as a drug delivery device (page 1, lines 4 and 5; page 27, line 2 to page 28 line 13), used in sealing leaks in tissue (page 24, lines 9-29) and in orthopedic surgery, it can be used as bone repair (page 25, lines 11 and 12). The carrier

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composition may also contain free radical photoinitiator such as eosin or eosin Y (page 26, lines 28-31) meeting claims 10, 11, 13, 36, 37 and 39. The carrier composition is aqueous (page 26, line 25) meeting claims 2, 28, 105 and 107. The carrier composition is applicable for human use (page 14, line 18; page 33, line 27) meeting the claims requiring vertebrates and humans, claims 5, 8, 9, 34 and 35. The presence of hyaluronic acid, dextran and heparin (page 14, lines 9-11) meets the limitation of additive in claims 18 and 19.

While Jarret discloses the carrier composition of the claimed invention, and while Jarret discloses that the carrier composition is a drug delivery device and specifically mentions the use of the composition for repair of bone, the carrier composition of Jarret does not contain osteotherapeutic material. However, it is known in the art that bone morphogenic protein is used for bone repair (see claims 3, 9, 19, 22, 25 and 26 of Rodgers). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate BMP in the carrier composition to repair bone.

No claim is allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 272-0594. The examiner can normally be reached on 7 a.m. to 5:30 p.m. (Monday to Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Blessing Fubara  
Patent Examiner  
Tech. Center 1600

A handwritten signature in black ink, appearing to read "B. Fubara", is written over the printed name "Blessing Fubara".